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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,502	10/07/2003	Fabiano Rimediotti	71161	5507

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EXAMINER

BUEKER, RICHARD R

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/680,502	Applicant(s) RIMEDIOTTI ET AL.	
	Examiner Richard Bueker	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>Nov. 10, 2003</u> . | 6) <input type="checkbox"/> Other: ____. |

Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the phrase "each of said sources is designed to form at least two pools" is written in terms of an intended use and is vague and indefinite because it is unclear whether it requires the presence of at least two pools. The scope of this limitation is unclear. Applicants should clearly recite the presence of cavities in which the pools are formed. In claim 11, the phrase "said superficial depressions" lacks proper antecedent basis. In claim 12, the phrase "the zones where said at least two pools must be formed" lacks proper antecedent basis. In claims 13 and 27, the phrase "said incision lines" lacks proper antecedent basis and should be changed to "said superficial incision lines". The use of the word "offset" in claim 15 is unclear, and applicants should provide a dictionary definition that makes clear the meaning of this word as used in claim 15. In claim 17, the scope and meaning of the phrase "said upper surface being treated" is unclear, and appears to be a recitation of intended use. The same is true for the claim 19 phrase "said boat or bar is treated". Applicants should clearly recite the presence of cavities in which the pools are formed. In claim 24, the phrase "the region" lacks proper antecedent basis. Claims 24 and 26 should be provided with a period at their ends. In claim 28, line 9, "said metal wire" lacks proper antecedent basis. In claim 28, the phrase "each of said sources is suitable for forming thereon at least two pools" is written in terms of an intended use and is vague and indefinite because it is unclear whether it requires the presence of at least two pools. The scope of this limitation is unclear. Applicants should clearly recite the

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presence of cavities in which the pools are formed. The references to pools in claims 29-36 are unclear, vague and indefinite because independent claim 28 does not actually require the presence of pools. In claim 30, the phrases "the pools of liquid metal of adjacent sources", "said alignment" and "the direction of said alignment" all lack proper antecedent basis. In claim 33, the phrase "the region" lacks proper antecedent basis. In claim 35, the phrase "said superficial depressions" lacks proper antecedent basis. In claim 36, the phrase "between 15° and 60° and preferably between 20° and 55° and even more preferably between 25° and 45°" is vague and indefinite.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schonherr (5,321,792) taken in view of Achtner (5,788,769), Kleyer I (5,179,622) and DE-970246. Schonherr discloses a vacuum evaporation apparatus for metallizing a strip substrate. It is noted that the Schonherr patent (see col. 1, lines 63-65) incorporates by reference the disclosure of U.S. patent 5,242,500 to Elvers, and therefore the entire disclosure of Elvers is included in the disclosure of Schonherr and is

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also relied on in this rejection. Elvers is the U.S. equivalent of DE-A-4027034 discussed on pages 2 and 3 of applicants' specification. Schonherr (Fig. 4) discloses the use of a plurality of resistively heated vaporization sources that are heated and fed with a metal wire, which is liquefied and vaporized, each source having a body extending in a main longitudinal direction. A strip substrate is fed over the sources in a feed direction.

Schonherr does not discuss the use of sources that have plural pools of molten metal on the surface of each source. Each of the secondary references, however, teach that a resistively heated elongated source having plural pools of molten metal on the surface of the source will provide improved performance in comparison to a resistively heated source having one elongated pool. It would have been obvious to one skilled in the art to substitute a plural pool source of the type taught by the secondary references for each of the single pool sources used in the apparatus of Schonherr, because the secondary references teach that such a substitution would have provided improved vaporizer performance. Regarding claims 8-13, which are product-by-process claims, see MPEP 2113. The sources described in claims 8-13 appear to be identical with or only slightly different from that disclosed by Aichtner, Kleyer I and DE-970246. It is noted that the "plurality of superficial incision lines" (claim 8, for example) reads on a conventional machining step to shape a ceramic or metal body, either prior to or after firing the body to sinter it. A "plurality of superficial incision lines" can be combined together to form a single large cavity.

Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schonherr (5,321,792) taken in view of Aichtner (5,788,769), Kleyer I (5,179,622) and

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DE-970246 for the reasons stated in the preceding paragraph, and taken in further view of Alexander (2,962,538). It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Ahtner, DE-970246 or Kleyer I, because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface wettability of the boat cavity. The superficial incision lines recited in claim 27 represent a product-by-process limitation and they appear to be identical with or only slightly different from that disclosed by Alexander. It is noted that the "plurality of superficial incision lines" (claim 8, for example) reads on Alexander's disclosed step (col. 4, lines 10-12) of cutting grooves in a pre-sintered body of ceramic.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schonherr (5,321,792) taken in view of Ahtner (5,788,769), Kleyer I (5,179,622), DE-970246 and Alexander (2,962,538) for the reasons stated in the preceding paragraph, and taken in further view of Anderson (3,770,529) (Fig. 2 and col. 3, line 61 to col. 4, line 10), Copley (4,914,270) (col. 1, lines 10-28), Fukushima (6,765,174) (Fig. 1, abstract and col. 9, lines 11-31) or applicants' description of the prior art (page 8, line 32 to page 9, line 10 of applicants' specification). It would have been prima facie obvious to form the cavities in the boats of Ahtner, DE-970246 or Kleyer I using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Also, it would have been prima facie obvious to form the superficial incision lines of Alexander using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a

ceramic body into a desired shape. Regarding applicants' description of the prior art, they state on page 9: "This type of incision machining is known per se to persons skilled in the art, but has not been used for the production of this type of sources (sic). The incision lines are typically formed by means of laser machining." It appears that applicants may be intending to say that laser machining was known in the prior art for forming an evaporation source, but has not been used to form "sources" (plural) as disclosed in their specification. Applicants should provide an unambiguous clarification of the meaning of this quoted statement.

Claims 17-20 and 23-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Achtner (5,788,769) (Fig. 3). Regarding claims 23-27, which are product-by-process claims, see MPEP 2113. The boat described in claims 24-27 appears to be identical with or only slightly different from that disclosed by Achtner.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achtner (5,788,769) taken in view of DE-970246 and/or Kleyer I (5,179,622). It would have been obvious to provide the pools of Achtner with a rectangular shape or flat bottom because DE-970246 and/or Kleyer I teach that evaporation processes can be successfully performed using resistively heated evaporation boats having pool cavities of the claimed shapes.

Claims 17-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE-970246 (see figs. 1-7) or Kleyer I (5,179,622) (see Figs. 1 and 2).

Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achtner (5,788,769), DE-970246 or Kleyer I (5,179,622), each taken in view of Alexander (2,962,538). It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Achtner, DE-970246 or Kleyer I, because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface wettability of the boat cavity. The superficial incision lines recited in claim 27 represent a product-by-process limitation and they appear to be identical with or only slightly different from that disclosed by Alexander.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achtner (5,788,769), DE-970246 or Kleyer I (5,179,622), each one taken in view of Alexander (2,962,538), and taken in further view of Anderson (3,770,529) (Fig. 2 and col. 3, line 61 to col. 4, line 10), Copley (4,914,270) (col. 1, lines 10-28), Fukushima (6,765,174) (Fig. 1, abstract and col. 9, lines 11-31), or applicants' description of the prior art (page 8, line 32 to page 9, line 10). It would have been prima facie obvious to form the cavities in the boats of Achtner, DE-970246 or Kleyer I using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Also, it would have been prima facie obvious to form the superficial incision lines of Alexander using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Regarding applicants' description of the prior art, they state on page 9: "This type of incision machining is known per se to persons skilled in the art, but has not been

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used for the production of this type of sources (sic). The incision lines are typically formed by means of laser machining.” It appears that applicants may be intending to say that laser machining was known in the prior art for forming an evaporation source, but has not been used to form “sources” (plural) as disclosed in their specification. Applicants should provide an unambiguous clarification of the meaning of this quoted statement.

Claims 28-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleyer II (5,198,032) in view of Yamaji (JP 1-219157) or Schonherr (5,321,792) and in further view of Aichtner (5,788,769), Kleyer I (5,179,622) and DE-970246. Kleyer II (Fig. 1) discloses a vacuum vaporization plant in which a web-like substrate is passed over at least one crucible, said crucible having a main longitudinal direction. The “feeding direction” of the web-like substrate is along the surface of rotating coating roller 18. It can be seen from Fig. 1 of Kleyer II that this feeding direction includes a direction of feeding that is inclined with respect to the main longitudinal direction of the crucible. Yamaji (Fig. 1) and Schonherr are cited to show that it was known in the art to provide plural aligned crucibles to coat a moving web substrate. It would have been obvious to one skilled in the art to use plural crucibles in the apparatus of Kleyer II because Yamaji and Schonherr teach that a moving web can be coated desirably more uniformly using plural crucibles.

Kleyer II does not discuss the use of sources that have plural pools of molten metal on the surface of each source. Each of Aichtner, Kleyer I and DE-970246, however, teach that a resistively heated elongated source having plural pools of molten

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metal on the surface of the source will provide improved performance in comparison to a resistively heated source having one elongated pool. It would have been obvious to one skilled in the art to substitute a plural pool source of the type taught by the secondary references for each of the single pool sources used in the apparatus of Kleyer II, Yamaji or Schonherr, because Aichtner, Kleyer I and DE-970246 teach that such a substitution would have provided improved vaporizer performance. Regarding claims 32-35, which are product-by-process claims, see MPEP 2113. The sources described in claims 8-13 appear to be identical with or only slightly different from that disclosed by Aichtner, Kleyer I and DE-970246. It is noted that the "plurality of superficial incision lines" (claim 8, for example) reads on a conventional machining step to shape a ceramic or metal body, either prior to or after firing the body to sinter it. A "plurality of superficial incision lines" can be combined together to form a single large cavity.

Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleyer II (5,198,032) in view of Yamaji (JP 1-219157) or Schonherr (5,321,792) and in further view of Aichtner (5,788,769), Kleyer I (5,179,622) and DE-970246 for the reasons stated in the preceding paragraph rejection, and taken in further view of Alexander (2,962,538). It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Aichtner, DE-970246 or Kleyer I, because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface wettability of the boat cavity. The superficial incision lines recited in claim 27 represent a product-by-process limitation and they appear to be identical with

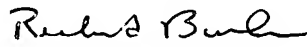
or only slightly different from that disclosed by Alexander. It is noted that the "plurality of superficial incision lines" (claim 8, for example) reads on Alexander's disclosed step (col. 4, lines 10-12) of cutting grooves in a pre-sintered body of ceramic.

The German language text of "Veredeln von Kunststoff-Oberflächen" (pages 107-134 submitted) cited in the IDS filed Nov. 10, 2003, has not been considered. The examiner does not read German and no proper concise explanation of relevance for this document was submitted. Also, the photographs included in the supplied pages are of too poor quality to consider. It is noted that a copy of pages 107-134 of this document was submitted, while page 2 of applicants' specification refers to "page 120 et seq.", which does not make clear what pages are intended. Meanwhile, the IDS does not list any page number and apparently refers to an entire book.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (571) 272-1431. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (571) 272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Richard Bueker
Primary Examiner
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